

PATENT ABSTRACTS OF JAPAN

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(54) DEVELOPMENT DEFECT PREVENTING PROCESS AND MATERIAL

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for forming a resist pattern, free of the deterioration of its pattern shape, such as a T-top and a round top caused by the influence of the processing atmosphere and the intermixture of surface coating and a resist and nonconforming particularly to a step of etching a chemical amplification photoresist, as well as to reduce development defects in a resist on a large diameter substrate of ≥ 8 inches in development.

SOLUTION: In the method for forming a resist pattern, a development defect reducing composition, e.g. comprising an acidic composition containing a surfactant is applied on a chemical amplification photoresist film formed on a substrate of ≥ 8 inches for preventing the formation of a layer which is hardly soluble in a developing solution on the surface of the resist as well, as to make the surface of the resist hydrophilic and to increase the reduction of the thickness of the chemical amplification photoresist film after exposure and development by 10-500 μm , by an appropriate degree of diffusion of an acid from the development defect reducing composition, as compared with the case where the composition is not coated.

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